Editor's note: 89 I.D. 538; **Appealed -- reversed, sub nom. Equity Oil Corp. v. Hodel, Civ. No. 83-F-1837 (D. Colo. Nov. 19, 1985); dismissed as moot, No. 85-1968, et al. (10th Cir. Aug. 12, 1987), 826 F.2d 948**

UNITED STATES
v.
WEBER OIL CO. ET AL.

IBLA 82-1111 Decided October 21, 1982

Consolidated cross appeals from decision of Administrative Law Judge John R. Rampton, Jr., dismissing contests against 203 oil shale placer mining claims and declaring portions of three oil shale placer mining claims null and void. Colorado Contests 193, 260, 685 through 688.

Affirmed in part; reversed in part.

1. Administrative Procedure: Burden of Proof -- Contests and Protests: Generally -- Evidence: Prima Facie Case -- Mining Claims: Contests -- Oil Shale: Mining Claims -- Rules of Practice: Appeals: Burden of Proof -- Rules of Practice: Government Contests

   In an oil shale mining claim contest, the Government bears only the burden of going forward with sufficient evidence to establish a prima facie case of invalidity, and the burden then shifts to the claimant to overcome this showing by a preponderance of the evidence. However, since abandonment and lack of good faith are questions of intent, the Government bears the ultimate burden of proving these charges.

2. Mining Claims: Generally -- Mining Claims: Determination of Validity -- Mining Claims: Discovery: Generally -- Mining Claims: Discovery: Geologic Inference -- Oil Shale: Mining Claims

Any exposure of the rich oil shale formation known as the Parachute Creek member can be geologically inferred to embrace sufficient quantity of high grade oil shale and, therefore, to constitute a valuable mineral deposit on an oil shale placer mining claim. However, exposure of a surface deposit of lean oil shale is inadequate to demonstrate the existence of rich deposits at depth in the absence of evidence showing that it is part of a deposit that can be followed to depth within the lateral limits of the claim.

3. Mineral Leasing Act: Generally -- Mining Claims: Assessment Work

The holder of an oil shale placer mining claim is required to perform $ 100 of annual assessment work each year for the benefit of such claim. Where there has not been "substantial compliance" with this requirement, such claim is forfeited to the United States. Resumption of work following a substantial breach of compliance does not bar the Government from asserting a forfeiture.

4. Mining Claims: Discovery: Geologic Inference -- Oil Shale: Generally -- Oil Shale: Mining Claims -- Words and Phrases

"Oil shale." Rock containing less than 3 gallons per ton of kerogen is not distinguishable from average shale or limestone in the earth's crust and is therefore not "oil shale." Discovery of such shale on a mining claim, without more, does not provide any basis for inferring the presence of oil shale at depth.

5. Mining Claims: Location

Failure to comply with state and local regulations requiring oil shale placer mining claims to be marked on the ground does not invalidate the claims when the claims were located before Feb. 25, 1920, in compliance with contemporary Departmental regulations.

6. Administrative Procedure: Burden of Proof -- Contests and Protests: Generally -- Evidence: Prima Facie Case -- Mining Claims: Contests -- Oil Shale: Mining Claims -- Rules of Practice: Appeals: Burden of Proof -- Rules of Practice: Government Contests

Where evidence creates only inferences of lack of good faith in the location and holding of mining claims and fails to show clearly that these claims were abandoned, these charges are not sustained.

7. Equitable Adjudication: Generally -- Mining Claims: Determination of Validity -- Oil Shale: Mining Claims

The Department is not barred by the equitable doctrines of laches or waiver from declaring oil shale placer mining claims null and void, since, until patent issues, it has the power and duty to invalidate adverse interests in public lands as required by governing laws.

8. Mineral Lands: Determination of Character of -- Mining Claims: Mineral Lands

Where 10-acre portions of oil shale placer mining claims cover lands from which erosion has removed the Parachute Creek member (the principal body of rich oil shale), there is no geological basis to infer the presence of rich oil shale, and such portions of the claims are properly determined to be nonmineral in character.

APPEARANCES: Marla E. Mansfield, Esq., Lowell L. Madsen, Esq., and Lyle K. Rising, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Denver, Colorado, for the Bureau of Land Management; John W. Savage, Jr., Esq., Rifle, Colorado; James Clark, Esq., William D. Maer, Esq., Bruce Pringle, Esq., Richard H. Shaw, Esq., H. Michael Spence, Esq., and Don H. Sherwood, Esq., Denver, Colorado; Richard W. Hulbert, Esq., New York, New York; and Donald L. Morgan, Esq., and Henry J. Plog, Jr., Esq., Washington, D.C., for the various contestees.

OPINION BY ADMINISTRATIVE JUDGE HENRIQUES

The Bureau of Land Management (BLM), Department of the Interior, has appealed the July 16, 1982, decision of Administrative Law Judge John R. Rampton, Jr., insofar as it dismissed contests against 199 oil shale placer mining claims. The holders of interests in these claims have filed answers to this appeal. The holders of three oil shale placer mining claims have appealed Judge Rampton's decision declaring portions of them null and void because they are nonmineral in character. BLM has answered this cross appeal.

At various times in May 1981, the Colorado State Office, BLM, filed six complaints or amended complaints against six different groups of oil shale placer mining claims. The six groups comprised 203 mining claims in all. 1/ Answers were filed in each contest and, on June 18, 1981, the matter was referred to the Hearings Division, Office of Hearings and Appeals, for appointment of an Administrative Law Judge to convene a fact-finding hearing. Judge Rampton did so and issued his decision on July 16,

1/ See Appendix.

1982, dismissing the contests as to all but three of the mining claims, which, as noted above, he declared null and void in part. These appeals followed.

Judge Rampton's decision fully addressed the lengthy history of litigation concerning questions bearing on the validity of oil shale placer mining claims, as do our previous decisions concerning such claims cited below, and we will not burden this decision with another recitation of this history. We shall address each issue relevant to the validity of these claims and apply each holding to the question of the claims' validity. In view of judicial concern voiced in earlier oil shale litigation that all relevant issues be addressed, we have endeavored not to regard any issue as moot.

Burden of Proof

[1] In United States v. Strauss, 59 I.D. 129 (1945), the Department held that once the Government makes a prima facie case of no discovery, the burden shifts to the claimant, as the proponent of his claim's validity, to overcome this showing. This procedure subsequently received judicial approval as being in accord with the Administrative Procedure Act in Foster v. Seaton, 271 F.2d 836 (D.C. Cir. 1959). It has been followed ever since. See, e.g., United States v. Haskins, 59 IBLA 1, 88 I.D. 925 (1981); United States v. Hooker, 48 IBLA 22 (1980). See also United States v. Bohme, 48 IBLA 267, 300, 87 I.D. 248, 264-65 (1980) (Bohme I).

We also observed in Bohme I, by way of dictum, that "[a]bandonment, being essentially a question of intent, is difficult of proof, and perhaps should impose a heavy evidentiary burden on the one who asserts it." Id. at 303, 87 I.D. at 266. Judge Rampton, following Bohme I, ruled that, in all issues except abandonment, the Department need only present a prima facie case on any specific charge in the contest complaint and that the ultimate burden of proof then devolves to the mining claimants on that issue. We agree with this holding, except that the Government has the ultimate burden as to charges of lack of good faith, as well as to charges of abandonment.

Judge Rampton's decision contains findings of fact on all issues except the minimum standard for kerogen content of oil shale, and the parties have not generally challenged these findings on appeal. 2/ Thus, the only issues to which we must apply the burden of proof tests are (1) whether these claims contain minerals meeting the minimum standard for kerogen content of oil shale, (2) abandonment, and (3) lack of good faith.

2/ BLM disputed Judge Rampton's finding that the Hoffman Nos. 20 and 46 claims (Contest No. Colorado 685) have exposures of the Parachute Creek member on them. The record supports BLM. This finding of fact is vacated. Claimants argue that there was insufficient evidence to establish failures to perform assessment work, and that the Department cannot rely on the absence of recorded assessment work affidavits to prove such failure. We disagree. Colorado law provides only that a mining claimant may record proof of this work. Colo. Rev. Stat. § 33.43.114 (1973). His failure to present record copies of such proof from relevant periods, or to explain why they are unavailable, creates a strong inference that the work was not accomplished. This inference could have been overcome by evidence showing that assessment work had been performed. The claimants, however, failed to convince Judge Rampton that such work was actually performed.

Discovery

Under the Act of May 10, 1872, 17 Stat. 91, 30 U.S.C. § 22 (1976), "all valuable mineral deposits in lands belonging to the United States" are, under specified conditions, open to exploration and purchase. Ordinarily, in order for a mining claim to go to patent or to withstand a contest of its validity, there must be a "mineral deposit" on the claim, and this deposit must be presently "valuable," under time-honored tests developed by the Department and the Courts. United States v. Coleman, 390 U.S. 599 (1968); Chrisman v. Miller, 197 U.S. 313 (1905).

However, by virtue of Freeman v. Summers, 52 L.D. 201 (1927), as interpreted by the Supreme Court in Andrus v. Shell Oil Co., 446 U.S. 657 (1980), the holder of an oil shale placer claim need not show that any oil shale on his claim is presently valuable, since the requirement of "present value" does not apply to oil shale claims, and since the prospective value of oil shale as a resource may be presumed. But, the claimant is not entitled to benefit from this presumption unless he has made a "discovery" of deposits of oil shale.

The sine qua non of any cognizable "discovery" of minerals on a mining claim is an exposure of those minerals. Either surface exposure or drill core samples will suffice. Where, as here, oil shale had been withdrawn from mineral location by the Act of February 25, 1920, 30 U.S.C. § 181 (1976),

the exposure of oil shale must have been made prior to the date of the withdrawal. The presence of valuable minerals may not be inferred from geological data showing the presence of similar minerals in the vicinity of the claim. United States v. Jackson, 53 IBLA 289, 296 (1981); United States v. Henault Mining Co., 73 I.D. 184 (1966), aff'd, Henault Mining Co. v. Tysk, 419 F.2d 766 (9th Cir. 1969). The extent of a discovery may be inferred from such data, but absent actual exposure of minerals no "discovery" exists. United States v. Edeline, 39 IBLA 236, 241 (1979). Any "discovery" must also be shown to have survived to the present. United States v. Kincanon, 54 IBLA 95 (1981).

[2] The decision in Freeman v. Summers, supra at 204-05, contains the relevant test for determining whether there has been a "discovery" of oil shale:

> [T]he law requires as a prerequisite to a valid location that mineral be discovered within the limits of the claim located; that the mineral indications shall be such as to warrant a prudent man in the further expenditure of time and money, with a reasonable prospect of success. In order to warrant that proceeding, he must have discovered mineral in such situation and such formation that he can follow the vein or the deposit to depth, with a reasonable assurance that paying minerals be found. In other words, the discovery of an isolated bit of mineral, not connected with or leading to substantial prospective values, is not a sufficient discovery; but a mining locator is not expected to find at the surface or in a shallow working a body of mineral which can be immediately mined and reduced at a profit. It is sufficient, as already stated, if he finds mineral in a mass so located that he can follow the vein or the mineral-bearing body, with reasonable hope and assurance that he will ultimately develop a paying mine. [Emphasis added.]

We recently reaffirmed this test in United States v. Bohme (Supp.), 51 IBLA 97, 87 I.D. 535 (1980) (Bohme II), noting as follows:

> As we read Freeman v. Summers, an exposure of the Parachute Creek member, even though of limited extent, can be geologically inferred to embrace sufficient quantity of high grade oil shale so as to constitute a valuable mineral deposit. We thus perceive one of the issues before this Board is whether contestees' claims contain an exposure of the Parachute Creek member that can be followed to depth with a reasonable assurance that paying minerals will be found.

Id. at 106, 87 I.D. at 540. Under Freeman v. Summers, supra, exposure of a lean surface formation is inadequate evidence from which to infer the existence of rich deposits beneath. What is required is evidence showing that the exposure can be followed to such rich deposits at depth within the limits of the claim.

The general area in which these claims are situated is known as the Piceance Creek basin. There are two relevant independent geologic formations in this area, the Green River formation and the Uinta formation. The Parachute Creek member, which contains rich oil shale, is part of the Green River formation. The Uinta formation (formerly called the Evacuation Creek member and formerly believed to be part of the Green River formation) is a thick layer of generally oil-barren sandstone. It is as much as 1,400 feet thick and overlies the Green River formation. Thus, in this area, the Parachute Creek member is generally covered by a vast amount of oil-barren sandstone.

The Parachute Creek member does outcrop, totally uncovered by the barren Uinta formation, at places where erosion has cut through the Uinta formation, such as along streams and drainages, thereby exposing the rich oil shale of the Parachute Creek member. As discussed below, some of the

present claims contain such outcrops, and there is no question that there has been "discovery" on these claims.

However, the principal surface deposits of oil shale found in the Uinta formation are not outcroppings of the rich Parachute Creek member, but are instead "tongues" of marlstone of inferior quality. Although these tongues of lean marlstone are thought to meet the Parachute Creek member at depth, they do so at great lateral distance from the surface outcroppings, on the order of tens of miles. Thus, these tongues of marlstone cannot be followed to depth to the rich deposits of the Parachute Creek member within the limits of any mining claim. Inasmuch as these claims are placer rather than lode, no extralateral rights appertain to them, and the existence of the marlstone outcrops affords no rights to deposits outside the limits of the claim. Accordingly, they do not meet the requirement of Freeman v. Summers/Bohme II.

Claimants argue that Freeman v. Summers, supra, stands for the proposition that any surface deposit, however lean, justifies by itself that geological inference of rich beds of oil shale at depth. 3/ The test announced in Freeman v. Summers, quoted above and adopted in Bohme II, is at odds with this interpretation, since it states that "the discovery of an isolated bit

3/ Claimants cite the comments of Assistant Secretary Albert Finney in testimony before Congress in 1931, 4 years after Freeman v. Summers, supra, as proof of their contention:

"The 'Green River Formation' is a term used to describe the entire mass of the earth's surface in this particular area, whether interspersed with barren or lean areas. It unquestionably carries valuable shale beds. They undoubtedly pass into and under the land in question. When the decision states that the miner could, with confidence, follow the formation, it means he could dig down through this formation, and whether he encountered lean or absolutely barren strata, could nevertheless proceed with assurance at a reasonable depth that he would intersect the several rich shale-bearing beds therein." (Emphasis added.)

of mineral, not connected with or leading to substantial prospective values, is not a sufficient discovery." Clearly, it must be shown that a lean bit of material connects with or leads to substantial mineral values. The record does not so demonstrate.

Reference to Oregon Basin Oil and Gas Co., 50 L.D. 244 (1923), the principal case cited in Freeman v. Summers, supra, supports the conclusion that more than lean surface deposits were required to establish "discovery" of oil shale. In Oregon Basin Oil, involving oil placer claims, "slight discoveries" of oil and gas "near the surface" were found not to establish the presence of oil and gas at depth. We adhere to the rule announced in Bohme II, supra. 4/

fn. 3 (continued)

However, Finney was simply wrong -- Freeman v. Summers, supra, does not require that the miner be able to follow "the [Green River] formation"; it requires that he be able to follow a "vein or deposit of oil shale." (Since oil shale does not occur in veins, a better description would have been an "exposure or deposit.") As is evident from Finney's accurate description of the Green River formation as "the entire mass of the earth's surface in this particular area," the two requirements are vastly different. Finney's posthoc comment notwithstanding, we adhere to the requirement as stated in Freeman v. Summers, since it was this language, not Finney's comments, which received judicial approval in Andrus v. Shell Oil Co., supra.

4/ The question remains (in view of the apparent absence of proof in Freeman v. Summers, supra, that the lean surface deposits evident on the claims could be followed to depth), why did the Department not follow its own rule and reject the claims? The answer must be, as BLM argues, that the lean surface deposits were regarded as the top of a "homogeneous mass" which, it was thought under geologic theory prevailing in 1927, could be followed with reliability to richer deposits at depth. Claimants dispute that the decision was based on the "homogeneous mass" theory, pointing to a statement to this effect made by Assistant Secretary Finney to Congress in 1931. Nevertheless, the decision itself, noting that contestants had advanced the "homogeneous mass" theory, described it at length without stating that it was erroneous. To the contrary, the decision concluded (albeit erroneously), that contemporary Geological Survey publications contained data supporting "the allegations of contestant," including, presumably, the homogeneous mass concept. Of course, we are not bound to ignore current geological data disproving the theory (see discussion under "10-Acre Rule," infra.)

Applying this test to the specific facts, we hold that there were "discoveries" of rich deposits of oil shale on the following claims, on which there are prominent exposures of the rich Parachute Creek member, due to the presence of deep gulches formed by drainages and streams: Sunset Nos. 1, 5, 7 through 20, 22 through 24, and 26 through 29 (Contest No. Colorado 193); Greeley Nos. 1 through 6, and 8 (Contest No. Colorado 686); and Jackpot Nos. 1 through 11 (Contest No. Colorado 687). We reject BLM's contention that some of these claims are invalid because the points designated as "discovery points" prior to 1920 are not within the Parachute Creek member. It is enough that the Parachute Creek member is now exposed somewhere on the claims, and also was exposed on February 25, 1920. Judge Rampton's decision is affirmed insofar as it dismissed the contest against these claims.

The remaining claims contain, at best, 5/ lean outcroppings of marlstone tongues that do not lead to the Parachute Creek member at depth within the limits of the claims. Judge Rampton conceded that the mineralization on these claims is inadequate to satisfy the discovery test of Bohme II. These claims are as follows: Sunset Nos. 2 through 4, 6, 21, 25, 30, and 31 (Contest No. Colorado 193); Liberty Bell Nos. 1 through 12, Tomboy Nos. 1 through 12, Bute Nos. 20 and 29, Atlas Nos. 4 through 6, 8, 11, and 13 through 16 (Contest No. Colorado 260); Hoffman Nos. 20 and 46 (Contest No. Colorado 685); Greeley No. 7 (Contest No. Colorado 686); Lucy Agnes Nos. 1 and 2, Patricia Nos. 1 through 8; Madge Nos. 1 through 8, Edna Nos. 1 through 8, Grace Nos. 1 through 8, Louise Nos. 1 through 6, Betty Nos. 1 through 8, Goldbug Nos. 1 through 4, Florence Nos. 1 through 8, Hazel Nos. 1 through 8,

5/ See discussion under Minimum Kerogen Content of Oil Shale, infra.

Fay Nos. 1 through 8, Mary Ann Nos. 1 through 40 (Contest No. Colorado 688). Accordingly, these claims are null and void. Insofar as it is inconsistent with this holding, Judge Rampton's decision is reversed.

Annual Assessment Work

[3] In Hickel v. Hickel v. Oil Shale Corp. (TOSCO), 400 U.S. 48 (1970), the Supreme Court ruled that holders of oil shale placer mining claims were required by the General Mining Act of 1872, 30 U.S.C. § 28 (1976), as applied by section 37 of the Mineral Leasing Act of 1920, 30 U.S.C. § 193 (1976), to perform annual assessment work during each year, except when excused by act of Congress. The Supreme Court ruled at the same time that such claims were invalid unless there had been "substantial compliance" with this annual assessment work requirement. Although it noted in TOSCO that claimants had argued that the opposite rule had been in effect for 35 years prior to 1970 and could not be changed retroactively, the Supreme Court remanded the matter as to this and other issues, since they had not been addressed in previous proceedings below.

The matter ultimately returned to the Board in 1980, sub nom. United States v. Bohme. In Bohme I, supra, we applied the annual assessment work rule announced in TOSCO retroactively, ruling that there had not been substantial compliance with the $ 100 annual assessment work requirement, and affirmed the Administrative Law Judge's conclusion that estoppel did not bar the retroactive application of this rule. We also ruled that laches did not bar contesting the claims on this issue. We accordingly declared the claims in question null and void.

In the present contests, Judge Rampton found that there had not been substantial compliance with the assessment work requirements for any of the 203 mining claims under challenge:

> The abstracts in evidence show that the owners of the claims in issue in these contests failed or chose not to perform assessment work over substantial periods of time. Contestant has compiled from the abstracts a summary of assessment work (Contestant's opening brief, p. 133). This chart, modified to exclude statements made where controversy exists as to the facts, is accepted as findings of fact.

Failures to Perform Revealed in Abstract

Contest	Claim Name	1920-1935(a) (16 yrs.)	1936-1969 (34 yrs.)	1970-1981 (12 yrs.)
193	Sunsets (31)	Total	32 yrs.	10 yrs.
260	Tomboys, Butes, Liberty Bells, Atlases (35)	Total	26 or 28 yrs.(b)	0
685	Hoffmans (2)	Total	Total (c)	11 yrs.
686	Greeleys [(8)]	Total	23 yrs. (d)	
687	Jackpots 1-3	3 yrs. (e)	29 yrs.	10 yrs.
	Jackpots 4-11	5 yrs.		
688	Mary Annes (40)	12 yrs.	33 yrs.	1 yr.(f)
	Florences, Fays, Hazels (24)	8 yrs.	33 yrs.	1 yr.(f)
	Lucy Agnes (2)	10 yrs.	32 yrs.	1 yr.(f)
	Grace Louise, Patricia, Edna, Betty, Goldbug, Madge (50)	Total	33 yrs.	1 yr.(f)

(a) Assessment work was excused in 1932. In computing lapses other than "total", this year was not counted.

(b) Includes additional information provided by TOSCO. Work was performed on a block of 110 claims.

(c) Evidence exists to show work in one year.

(d) Final certificate issued 1959.

(e) Evidence shows work performed in one additional year, namely, 1931.

(f) Final certificate was issued in 1978.

By any standard of measurement applicable, the defaults in performance of assessment work must be and are found to be substantial. Although it is possible that assessment work was done but no affidavits filed, the probability is remote and would be the exception rather than the rule. No serious contention is made by the mining claimants that substantial compliance was made by the original locators. [Emphasis supplied.]

(Decision at 80-82). Despite these findings, Judge Rampton declined to apply the rule in TOSCO/Bohme I, ruling that the Department was estopped from doing so.

Even putting aside our substantial doubts that equitable estoppel may be applied against the Government under governing administrative standards (43 CFR 1810.3(c)), we note that it clearly is not apt here, since claimants' failure to do and record evidence of assessment work, or file a notice of intention to hold when Congress had suspended the assessment work requirements, did not result from any misconduct by the Department's officials. At a minimum, "affirmative misconduct" by Government officials has been found to be an essential prerequisite to the judicial application of equitable estoppel and it is unclear that estoppel would lie even if there were affirmative misconduct. See Schweiker v. Hansen, 450 U.S. 785, 788-89 (1981); United States v. Wharton, 514 F.2d 406 (9th Cir. 1975). Any statements made by the Department in the years prior to TOSCO to the effect that failure to do assessment

work would not result in forfeiture of mining claims to the Government, on which claimants evidently allege they relied, were apparently legally accurate in view of the dicta to this effect in Ickes v. Virginia-Colorado Development Corp., 295 U.S. 639 (1934) and Wilbur v. United States ex rel. Krushnic, 280 U.S. 306 (1930). Numerous other courts have insisted that the official making the misstatement must know the facts and have been able to recognize it as such. United States v. Georgia-Pacific Co., 421 F.2d 92 (9th Cir. 1970) and cases cited. Clearly, those Departmental officials who misinformed claimants (or their predecessors) had no way to predict that the Supreme Court would rule as it did in TOSCO.

We addressed the applicability of estoppel in Bohme I:

> The simple fact is that contestees can point to no decision of any Federal court, or any formal decision or Instruction issued by the Department of the Interior that ever purported to hold that a mining claimant was not required under 30 U.S.C. § 28 (1976) to perform annual assessment work. The decisions in Krushnic and Virginia-Colorado dealt not with the question whether oil shale claimants were required to comply with the provisions of section 28, but whether the United States would be a beneficiary of a failure to perform the assessment work. Indeed, both Krushnic and Virginia-Colorado expressly noted that a mining claimant was required to perform labor of $ 100 annually for each claim. See 280 U.S. at 317; 295 U.S. at 645. The Departmental decisions and pronouncements to which contestees advert were of similar import.
>
> Thus, contestees, in effect, are arguing that an equitable estoppel should lie because they knowingly violated an affirmative obligation under the law in reliance on the fact that they were immune from punishment. They are attempting to resort to equity to absolve themselves from the consequences of their willful violations of the mining law. Among the cardinal principles of equity, however, are the maxims that equity may be invoked only to do equity, and that one who seeks equitable relief must do so "with clean hands." Appellants can show no equitable basis for the invocation of an estoppel to excuse their past failures to perform the annual assessment work mandated by 30 U.S.C. § 28 (1976).

48 IBLA at 324-25, 87 I.D. at 277-78. We adhere to that ruling. In the absence of any action by a Federal District Court to reverse this ruling, it represents the established Departmental interpretation of the law, and, as such, was binding on the Administrative Law Judge.

The strong language of TOSCO leaves no doubt that the Government retained an interest in these claims by virtue of the terms of the Mineral Leasing Act. The failure to meet the "command" of the annual assessment work provision of the 1872 Act should return these lands to Federal stewardship so that their mineral wealth may be exploited by leasing to the public benefit or the lands be put to other public uses. TOSCO, supra at 54. This public statutory interest outweighs any equitable considerations that might be deemed to exist.

Independent of the above, we stress that there could be no basis whatsoever to ignore substantial defaults in the performance of annual assessment work occurring after the Supreme Court's ruling in TOSCO in 1970 (or, at the latest in 1972, when the Department amended its regulations to reflect the ruling). The record shows that there were substantial lapses in performance of annual assessment work after 1970 on the following claims: Sunset Nos. 1 through 31 (10 years) (Contest No. Colorado 193); Hoffman Nos. 1 and 2 (11 years) (Contest No. Colorado 685); and Jackpot Nos. 1 through 11 (10 years) (Contest No. Colorado 687). 6/

6/ There would be substantial lapses even were we to regard the amendment of the Departmental regulations in 1972 as the controlling date for reviewing compliance.

Contestants argue that charges of failure to perform assessment work must be brought during default and that resumption of work bars a challenge on these grounds. Contestants' argument relies on language to this effect from Wilbur v. Krushnic, supra. This language was superseded by the ruling in TOSCO, supra.

TOSCO is on all fours with the instant case. In TOSCO, the Supreme Court considered mining claims which the district court had held had been "'maintained' * * * by a resumption of the assessment work before a challenge of the claim by the United States had intervened." 400 U.S. at 52. Nevertheless, it concluded that substantial failure to perform annual assessment work did invalidate these claims, the intervening resumption of work notwithstanding. It disclaimed the "dicta" of Krushnic and reversed the District Court's holding applying it. Following TOSCO, we reject contestants' argument.

Judge Rampton's decision is reversed insofar as it failed to declare all of these claims null and void because of substantial defaults in performance of annual assessment work on them.

Minimum Kerogen Content of Oil Shale

[4] Judge Rampton declined to make findings on the amounts of oil yields, or to consider whether to apply any "quantum standard." BLM asserts that there is a minimum kerogen content for "oil shale" of 3 gallons per ton. That is, rock containing less than 3 gallons per ton is not distinguishable from average shale or limestone in the earth's crust. We agree.

Thus, samples of shale bearing less than 3 gallons per ton of kerogen are not "oil shale," and discoveries of such shale do not provide any basis for inferring the presence of oil shale at depth.

As many as three mineral samples were taken by BLM on each claim. A prima facie case that no "oil shale" was present on a particular claim is made only where no sample contained at least 3 gallons per ton of kerogen. Where any one of claimants' samples from any such claim was found to contain at least 3 gallons per ton of kerogen, claimants have successfully rebutted the prima facie showing that no "oil shale" was present there.

We hold that BLM successfully made a prima facie showing that no "oil shale" was present, and that claimants failed to rebut this showing, on the following claims: Sunset Nos. 2 through 4, 6, 21, 25, 30, and 31 (Contest No. Colorado 193); Tom Boy No. 1 (Contest No. Colorado 260); Hoffman Nos. 20 and 46 (Contest No. Colorado 685); Betty Nos. 4 through 6, Edna Nos. 3 through 8, Fay Nos. 1, 2, and 4 through 8, Florence No. 2, Goldbug No. 4, Grace Nos. 2, 4, and 7, Hazel No. 8, Louise No. 6, Lucy Agnes No. 1, Madge Nos. 1, 2, 4, and 6 through 8, Mary Ann Nos. 1, 5 through 7, 15 through 18, 20, 22, 24 through 26, 33, 34, 39, and 40, and Patricia Nos. 2 through 6, and 8 (Contest No. Colorado 688).

Alleged Failure to Post on the Ground

[5] The Government has contested all but two of these claims on the ground that the locators did not comply with Colorado State posting requirements, and that the claims are invalid because they were not marked on the

ground. The Department does require that mining claimants comply with state and local regulations regarding marking of mining claims on the ground, per 43 CFR 3831.1, and this regulation has been judicially interpreted as imposing a Federal requirement that state and local posting requirements be met. Roberts v. Morton, 549 F.2d 158, 161-62 (10th Cir. 1977), aff'g United States v. Zweifel, 11 IBLA 53, 80 I.D. 323 (1973).

However, this requirement of compliance with local posting laws long postdated the location of the present claims. As we held in United States v. Zweifel, supra, location of these placer claims was governed by the rules announced in Reins v. Murray, 22 L.D. 409 (1896), that no markings were required for placer claims located on surveyed lands, and in Hughes v. Ochsner, 27 L.D. 396 (1898), that breach of laws requiring marking did not justify cancellation. Accordingly, Judge Rampton properly dismissed the contests insofar as they were based on failure to mark the claims on the ground and his decision is affirmed on this issue.

Abandonment, Absence of Good Faith in Locating and Holding Claims

[6] We noted in Bohme I, supra at 303, that whether a mining claim is abandoned is essentially a question of the intent of the party charged with abandonment. As noted above, we also observed by way of dictum that asserting abandonment as a grounds for invalidating a mining claim "perhaps should impose a heavy evidentiary burden on the one who asserts it." We now hold that the Government has the ultimate burden of proving abandonment.

Similarly, whether a claimant lacks good faith in locating and holding mining claims is a question of his intent. Accordingly, the Department must meet the same ultimate burden of proving these allegations.

Judge Rampton has dealt with the history of oil shale claims, pointing out why there are inherent suspicions about whether they were located or held in good faith. We agree with his holding that, although the evidence is adequate to create inferences of impropriety by the previous owners of these claims, it falls short of what is necessary to prove those charges. While we do not accept his conclusion that laches can act to bar the Department from enforcing governing laws and principles (see below), we recognize that the longer the Department delays in contesting claims, the more difficult it becomes to present convincing evidence about individuals' intentions. Thus, the unavailability of clear proof of the type of impropriety which the evidence suggests may, without injustice, work to the detriment of the Government. Judge Rampton's decision is affirmed on this point.

Effect of Previous Administrative Determinations Invalidating Claims

BLM contested these claims on the ground that previous decisions had invalidated them. Judge Rampton noted that, from 1928 to 1933, "[e]xcept for the Jackpot claims, all of the claims involved in the present proceedings were declared invalid in all contests for failure of the contestees to appear and file answers. In all instances, the sole charge was assessment work default" (Decision at 70). He made no specific holding on whether these decisions operated to bar the claimants from asserting the validity of their claims

under the doctrine of administrative finality. Further, although he noted that claimant had challenged the adequacy of the notice of these previous contests given to claimants, Judge Rampton made no findings of fact on this point.

Normally, we would remand the matter for further consideration of this question. However, the certainty of judicial review here obviates the need to do so, since the parties may address this issue then. The question of whether unappealed adverse previous decisions in oil shale contests bind the present claim owners is apparently still before the courts in the TOSCO/Bohme I dispute. See Bohme I, supra at 323-24, 87 I.D. at 276.

Laches, Waiver, Bona Fides Of Present Claimholders

[7] The Department is not barred by the equitable doctrine of laches from enforcing the pertinent public land laws and legal principles to invalidate certain of these mining claims. Justice Douglas made it crystal clear in TOSCO that the Department was not barred from further pursuing the question of validity of oil shale claims when he ordered it to do so:

> [W]e are of the view that § 37 of the 1920 Act makes the United States the beneficiary of all claims invalid for lack of assessment work or otherwise. It follows that the Department of the Interior had, and has, subject matter jurisdiction over contests involving the performance of assessment work. [Emphasis supplied.]

400 U.S. at 57.

Further, it is established that "so long as the legal title remains in the Government [the Department] does have power, after proper notice and upon adequate hearing, to determine whether [a mining] claim is valid and, if it be invalid, to declare it null and void." Cameron v. United States, 252 U.S. 450, 460 (1920). This authority has been more recently expressly applied to recognize IBLA's power and duty to reconsider and, if necessary, reverse previous administrative decisions incorrectly recognizing adverse interests in public lands, at any time up until the issuance of patent. Ideal Basic Industries, Inc. v. Morton, 542 F.2d 1364, 1368 (9th Cir. 1976).

With respect to appellant's attempted invocation of the doctrine of laches, we reiterate what we held in Bohme I:

> Regarding the defense of laches, Judge Sweitzer found that in the first instance the defense of laches is not available against the Government in cases involving public lands, citing United States v. California, 332 U.S. 19, 40 (1947), and secondly, that even were laches determined to be an available defense, it would clearly be circumscribed by the same limitations surrounding the doctrine of estoppel (Dec., pp. 53-54). We agree.

Id. at 325, 87 I.D. at 278. In the absence of any contrary guidance from the district court, we reaffirm this holding.

While not described as such by Judge Rampton or the parties, there is also the question of whether the Department has waived its right to enforce public land laws and legal principles by failing to do so in similar cases in the past in which it patented similar oil shale mining claims. The doctrine of waiver does not apply to bar the Department from enforcing the

public land laws, since, as discussed above, it retains its authority to determine the validity of adverse claims up until the issuance of patent. Cameron v. United States, supra. In United States v. California, supra, the Supreme Court ruled that the United States was not barred from asserting legal title to lands which it owned, even though it had putatively recognized adverse rights to similar lands in the State of California by needlessly "purchasing" these lands from the State, even though it actually owned them. In sum, prior action taken by the Department in derogation of the rights of the United States in lands does not bind the Department to repeat the derogation in the future.

Where, as here, mining claimants have not complied with the requirements of the mining laws, and no patent has issued, the Department is not barred from voiding the claims because of any previous determinations that the claims were not invalid, 7/ or because of previous failure to void claims in similar cases. Accordingly, we reverse Judge Rampton's holding that the Department is barred from challenging these decisions at this time.

Finally, we stress, as Judge Rampton held, that there is no basis to recognize the rights of the present claimants as bona fide purchasers, even assuming, arguendo, they have such status. The only statutory situation in

7/ Of course, the Department has never made any determination that any of these claims is valid. See United States v. Taylor, 19 IBLA 9, 82 I.D. 68 (1975). To the contrary, as Judge Rampton noted, the Department previously determined that they were invalid. Even assuming arguendo that these determinations were set aside, a matter still under judicial review in TOSCO (see discussion under "Effect of Previous Administrative Determinations Invalidating Claims"), the most that can be said is that, by setting aside these determinations, the claims were held not invalid.

which bona fide innocent purchasers may be protected is in oil and gas leasing. 30 U.S.C. § 184(h)(2) (1976). The fact that it was necessary to enact legislation to do so is a strong indication that Congress has not given this power to the Department in other situations. To the contrary, mining claims are interests in real property, and a purchaser can gain no greater rights than those held by his predecessor in interest.

Ten-Acre Parcels Of Claimed Land Which Are Nonmineral In Character

[8] Judge Rampton held that certain 10-acre parcels within the Jackpot claims (Contest No. Colorado 687) were nonmineral in character because erosion has removed all of the Parachute Creek member from them, leaving only lower members of the Green River formation generally barren of oil shale. We affirm.

Unlike "discovery," which requires an exposure of mineral before any geological inference may operate to establish the extent of that discovery, the "mineral character" of lands may be inferred from geological data alone. Thus, the presence of the Parachute Creek member throughout the vicinity of most of these claims is enough, per se, to support a finding that they are mineral in character, as the parties stipulated, but not to establish that there has been a discovery on any of these claims.

However, Judge Rampton found that erosion has removed the Parachute Creek member from portions of these claims, and claimants have not disputed

this finding. Thus, there is no basis for inferring the presence of rich oil shale in these portions. The grab samples taken by claimants on the parcels are insufficient to establish that they are mineral in character.

Contestants argue that the critical date for determination of the mineral character of these lands is February 25, 1920, the date the lands were withdrawn from mineral location. They assert that the circumstances at that time were such as to engender a belief that the lands were both prospectively valuable for minerals and mineral in character. Claimants are only half right: A claimant must show, to gain patent or prevail in a contest, (1) that the claimed lands were mineral in character (and that he had made a discovery) as of the date of the withdrawal, see Cameron v. United States, supra at 456; and (2) that the lands are presently mineral in character (and that the discovery persists) as of the date of the contest hearing or patent application. United States v. Noyce, 59 IBLA 268 (1981); United States v. Porter, 37 IBLA 313 (1978).

The nature of the geology of the area where the claims are situated is a question of fact. In answering it, we must examine all relevant geological data available to us at the time of our decision. We are not bound to use outdated geological information. The record supports Judge Rampton's finding that these parcels are nonmineral in character. His decision is affirmed on this point.

Accordingly, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed in part and reversed in part as described above.

Douglas E. Henriques
Administrative Judge

We concur:

Anne Poindexter Lewis
Administrative Judge

James L. Burski
Administrative Judge

ATTACHMENTS:

APPENDIX

CONTEST NO. 193

CLAIM NAME	LAND DESCRIPTION
	T. 3 S., R. 99 W., 6th P.M.
SUNSET # 1	Sec. 20: S 1/2 S 1/2
SUNSET # 2	Sec. 20: N 1/2 S 1/2
SUNSET # 3	Sec. 20: S 1/2 N 1/2
SUNSET # 4	Sec. 20: N 1/2 N 1/2
SUNSET # 5	Sec. 17: SE 1/4
SUNSET # 6	Sec. 17: SW 1/4
SUNSET # 7	Sec. 18: SE 1/4
SUNSET # 8	Sec. 18: Lots 3, 4, E 1/2 SW 1/4 (SW 1/4)
SUNSET # 9	Sec. 19: Lot 1, NE 1/4 NW 1/4 N 1/2 NE 1/4 (N 1/2 N 1/2)
SUNSET # 10	Sec. 19: Lot 2, SE 1/4 NW 1/4, S 1/2 NE 1/4 (S 1/2 N 1/2)
SUNSET # 11	Sec. 19: SE 1/4
SUNSET # 12	Sec. 18: Lots 1 and 2, E 1/2 NW 1/4 (NW 1/4)
SUNSET # 13	Sec. 18: NE 1/4
SUNSET # 14	Sec. 17: NW 1/4
SUNSET # 15	Sec. 17: NE 1/4
SUNSET # 16	Sec. 8: SE 1/4
SUNSET # 17	Sec. 8: SW 1/4
SUNSET # 18	Sec. 7: SE 1/4
SUNSET # 19	Sec. 7: Lots 3 and 4, E 1/2 SW 1/4 (SW 1/4)

SUNSET # 20	Sec. 7: Lots 1 and 2, E 1/2 NW 1/4 (NW 1/4)
SUNSET # 21	Sec. 7: NE 1/4
SUNSET # 22	Sec. 8: NW 1/4
SUNSET # 23	Sec. 8: NE 1/4
SUNSET # 24	Sec. 5: SE 1/4
SUNSET # 25	Sec. 5: SW 1/4
SUNSET # 26	Sec. 6: SE 1/4
SUNSET # 27	Sec. 6: Lots 6 and 7, E 1/2 SW 1/4 (SW 1/4)
SUNSET # 28	Sec. 6: Lots 3, 4, and 5, SE 1/4 NW 1/4 (NW 1/4)
SUNSET # 29	Sec. 6: Lots 1 and 2, S 1/2 NE 1/4 (NE 1/4)
SUNSET # 30	Sec. 5: Lots 3 and 4, S 1/2 NW 1/4 (NW 1/4)
SUNSET # 31	Sec. 5: Lots 1 and 2, S 1/2 NE 1/4 (NE 1/4)

CONTEST NO. 260

CLAIM NAME	LAND DESCRIPTION
	T. 4 S., R. 95 W., 6th P.M.
LIBERTY BELL # 1	Sec. 5: Lots 1 and 2; S 1/2 NE 1/4 (NE 1/4)
LIBERTY BELL # 2	Sec. 5: Lots 3 and 4, S 1/2 NW 1/4 (NW 1/4)
LIBERTY BELL # 3	Sec. 5: SE 1/4
LIBERTY BELL # 4	Sec. 5: SW 1/4
LIBERTY BELL # 5	Sec. 8: NE 1/4
LIBERTY BELL # 6	Sec. 8: NW 1/4

LIBERTY BELL # 7	Sec. 8: SE 1/4	
LIBERTY BELL # 8	Sec. 8: SW 1/4	
LIBERTY BELL # 9	Sec. 17: NE 1/4	
LIBERTY BELL # 10	Sec. 17: NW 1/4	
LIBERTY BELL # 11	Sec. 17: SW 1/4	
LIBERTY BELL # 12	Sec. 18: SE 1/4	
ATLAS # 4	Sec. 11: NE 1/4	
ATLAS # 5	Sec. 11: SE 1/4	
ATLAS # 6	Sec. 11: SW 1/4	
ATLAS # 8	Sec. 14: NW 1/4	
ATLAS # 11	Sec. 10: NE 1/4	
ATLAS # 13	Sec. 10: SE 1/4	
ATLAS # 14	Sec. 10: SW 1/4	
ATLAS # 15	Sec. 15: NE 1/4	
ATLAS # 16	Sec. 15: NW 1/4	
TOM BOY # 1	Sec. 18: Lots 5 and 6,	E 1/2 SW 1/4 (SW 1/4)
TOM BOY # 2	Sec. 18: Lots 3 and 4, E 1/2 NW 1/4 (NW 1/4)	
TOM BOY # 3	Sec. 18: NE 1/4	
TOM BOY # 4	Sec. 7: SE 1/4	
TOM BOY # 5	Sec. 7: NE 1/4	
TOM BOY # 6	Sec. 7: Lots 1 and 2, E 1/2 NW 1/4 (NW 1/4)	
TOM BOY # 7	Sec. 7: Lots 3 and 4, E 1/2 SW 1/4 (SW 1/4)	
TOM BOY # 8	Sec. 6: Lots 1 and 2, S 1/2 NE 1/4 (NE 1/4)	

TOM BOY # 9	Sec. 6: Lots 3, 4, and 5 SE 1/4 NW 1/4 (NW 1/4)
TOM BOY # 10	Sec. 6: Lots 6 and 7, E 1/2 SW 1/4 (SW 1/4)
TOM BOY # 11	Sec. 6: SE 1/4

T. 4 S., R. 96 W., 6th P.M.

TOM BOY # 12	Sec. 1: NE 1/4 Lots 1 and 2, S 1/2 NE 1/4 (NE 1/4)
BUTE # 20	Sec. 10: SW 1/4
BUTE # 29	Sec. 16: NE 1/4

CONTEST NO. 685

CLAIM NAME	LAND DESCRIPTION

T. 5 S., R. 95 W., 6th P.M.

HOFFMAN # 20	Sec. 5: Lots 1 and 5
HOFFMAN # 20 (Amended)	
HOFFMAN # 20 (Amended)	
HOFFMAN NO. 46	Sec. 3: Lots 4 and 6
HOFFMAN NO. 46 (Amended)	
HOFFMAN NO. 46 (Amended)	

CONTEST NO. 686

CLAIM NAME	LAND DESCRIPTION

T. 4 S., R. 99 W., 6th P.M.

GREELEY NO. 1	Sec. 27: NE 1/4
GREELEY NO. 1 (Amended)	Sec. 27: W 1/2 NE 1/4, W 1/2 E 1/2 NE 1/4
GREELEY NO. 2	Sec. 27: NE 1/4
GREELEY NO. 3	Sec. 27: SW 1/4

GREELEY NO. 4 Sec. 27: SE 1/4

GREELEY NO. 4 (Amended) Sec. 27: W 1/2 SE 1/4,
W 1/2 E 1/2 SE 1/4

GREELEY NO. 5 Sec. 34: NE 1/4

GREELEY NO. 5 (Amended) Sec. 34: W 1/2 NE 1/4, SE 1/4 NE 1/4,
W 1/2 NE 1/4 NE 1/4

GREELEY NO. 6 Sec. 34: NW 1/4

GREELEY NO. 7 Sec. 34: SW 1/4

GREELEY NO. 7 (Amended) Sec. 34: N 1/2 N 1/2 SW 1/4,
N 1/2 N 1/2 SW 1/4 NE 1/4

GREELEY NO. 8 Sec. 34: SE 1/4

GREELEY NO. 8 (Amended) Sec. 34: N 1/2 NW 1/4 SE 1/4,
N 1/2 N 1/2 S 1/2 NW 1/4 SE 1/4,
NW 1/4 NE 1/4 SE 1/4,
N 1/2 N 1/2 SW 1/4 NE 1/4 SE 1/4

CONTEST NO. 687

CLAIM NAME	LAND DESCRIPTION
	T. 6 S., R. 99 W., 6th P.M.
JACK POT NO. 1	Sec. 18: W 1/2 SE 1/4
JACK POT NO. 2	Sec. 18: E 1/2 SW 1/4
	Sec. 19: E 1/2 NW 1/4
JACK POT NO. 3	Sec. 18: W 1/2 SW 1/4
	Sec. 19: W 1/2 NW 1/4
	T. 6 S., R. 100 W., 6th P.M.
JACK POT NO. 4	Sec. 13: SE 1/4 SE 1/4
	Sec. 24: E 1/2 NE 1/4, NE 1/4 SE 1/4
JACK POT NO. 5	Sec. 13: SW 1/4 SE 1/4
	Sec. 24: W 1/2 NE 1/4, NW 1/4 SE 1/4
JACK POT NO. 6	Sec. 13: SE 1/4 SW 1/4
	Sec. 24: E 1/2 NW 1/4, NE 1/4 SW 1/4

JACK POT NO. 7 Sec. 13: SW 1/4 SW 1/4
Sec. 24: W 1/2 NW 1/4, NW 1/4 SW 1/4

JACK POT NO. 8 Sec. 14: SE 1/4 SE 1/4
Sec. 23: E 1/2 NE 1/4, NE 1/4 SE 1/4

JACK POT NO. 9 Sec. 14: SW 1/4 SE 1/4
Sec. 23: W 1/2 NE 1/4, NW 1/4 SE 1/4

JACK POT NO. 10 Sec. 14: SE 1/4 SW 1/4
Sec. 23: E 1/4 NW 1/4, NE 1/4 SW 1/4

JACK POT NO. 11 Sec. 14: SW 1/4 SW 1/4
Sec. 23: W 1/2 NW 1/4, NW 1/4 SW 1/4

CONTEST NO. 688

CLAIM NAME	LAND DESCRIPTION
	T. 4 S., R. 95 W., 6th P.M.
BETTY NO. 1	Sec. 21: NW 1/4
BETTY NO. 2	Sec. 21: SW 1/4
BETTY NO. 3	Sec. 21: NE 1/4
BETTY NO. 4	Sec. 21: SE 1/4
BETTY NO. 5	Sec. 22: NW 1/4
BETTY NO. 6	Sec. 22: SW 1/4
BETTY NO. 7	Sec. 22: NE 1/4
BETTY NO. 8	Sec. 22: SE 1/4
GRACE NO. 1	Sec. 25: NW 1/4
GRACE NO. 2	Sec. 25: SW 1/4
GRACE NO. 3	Sec. 25: NE 1/4
GRACE NO. 4	Sec. 25: SE 1/4
GRACE NO. 5	Sec. 26: NW 1/4
GRACE NO. 6	Sec. 26: SW 1/4

GRACE NO. 7	Sec. 26: NE 1/4
GRACE NO. 8	Sec. 26: SE 1/4
LOUISE NO. 1	Sec. 23: NE 1/4
LOUISE NO. 2	Sec. 23: SE 1/4
LOUISE NO. 3	Sec. 24: NW 1/4
LOUISE NO. 4	Sec. 24: SW 1/4
LOUISE NO. 5	Sec.
PATRICIA NO. 4	Sec. 35: SE 1/4
PATRICIA NO. 5	Sec. 36: NW 1/4
PATRICIA NO. 6	Sec. 36: SW 1/4
PATRICIA NO. 7	Sec. 36: NE 1/4
PATRICIA NO. 8	Sec. 36: SE 1/4

T. 5 S., R. 95 W., 6th P.M.

LUCY AGNES NO. 1	Sec. 4: Lot 1, S 1/2 of Lot 2, S 1/2 of Lot 3, Lot 4; 70.07 acres
LUCY AGNES NO. 1 (Amended)	
LUCY AGNES NO. 2	Sec. 4: S 1/2 N 1/2

T. 4 S., R. 95 W., 6th P.M.

MADGE NO. 1	Sec. 33: NW 1/4
MADGE NO. 2	Sec. 33: SW 1/4
MADGE NO. 3	Sec. 33: NE 1/4
MADGE NO. 4	Sec. 33: SE 1/4
MADGE NO. 5	Sec. 34: NW 1/4

MADGE NO. 6	Sec. 34: SW 1/4
MADGE NO. 7	Sec. 34: NE 1/4
MADGE NO. 8	Sec. 34: SE 1/4
FLORENCE NO. 1	Sec. 31: Lots 3 and 4, E 1/2 NW 1/4 (NW 1/4)
FLORENCE NO. 2	Sec. 31: Lots 5 and 6, E 1/2 SW 1/4 (SW 1/4)
FLORENCE NO. 3	Sec. 31: NE 1/4
FLORENCE NO. 4	Sec. 31: SE 1/4
FLORENCE NO. 5	Sec. 32: NW 1/4
FLORENCE NO. 6	Sec. 32: SW 1/4
FLORENCE NO. 7	Sec. 32: NE 1/4
FLORENCE NO. 8	Sec. 32: SE 1/4
FAY NO. 1	Sec. 29: NW 1/4
FAY NO. 2	Sec. 29: SW 1/4
FAY NO. 3	Sec. 29: NE 1/4
FAY NO. 4	Sec. 29: SE 1/4
FAY NO. 5	Sec. 30: Lots 1 and 2, E 1/2 NW 1/4 (NW 1/4)
FAY NO. 6	Sec. 30: Lots 3 and 4, E 1/2 SW 1/4 (SW 1/4)
FAY NO. 7	Sec. 30: NE 1/4
FAY NO. 8	Sec. 30: SE 1/4
HAZEL NO. 1	Sec. 19: Lots 1 and 2, E 1/2 NW 1/4 (NW 1/4)
HAZEL NO. 2	Sec. 19: Lots 3 and 4, E 1/2 SW 1/4
HAZEL NO. 3	Sec. 19: NE 1/4
HAZEL NO. 4	Sec. 19: SE 1/4

HAZEL NO. 5	Sec. 20: NW 1/4
HAZEL NO. 6	Sec. 20: SW 1/4
HAZEL NO. 7	Sec. 20: Lots 1, 2, 3, and 4 (NE 1/4)
HAZEL NO. 8	Sec. 20: SE 1/4
EDNA NO. 1	Sec. 27: NW 1/4
EDNA NO. 2	Sec. 27: SW 1/4
EDNA NO. 3	Sec. 27: NE 1/4
EDNA NO. 4	Sec. 27: SE 1/4
EDNA NO. 5	Sec. 28: Lots 1, 2, and 3 NE 1/4 NW 1/4 (NW 1/4)
EDNA NO. 6	Sec. 28: SW 1/4
EDNA NO. 7	Sec. 28: NE 1/4
EDNA NO. 8	Sec. 28: SE 1/4

T. 4 S., R. 96 W., 6th P.M.

GOLD BUG NO. 1	Sec. 36: Lots 3 and 4, S 1/2 NW 1/4 (NW 1/4)
GOLD BUG NO. 2	Sec. 36: Lots 1 and 2, S 1/2 NE 1/4 (NE 1/4)
GOLD BUG NO. 3	Sec. 36: SE 1/4
GOLD BUG NO. 4	Sec. 36: Lots 5 and 6, N 1/2 SW 1/4 (SW 1/4)
MARY ANN NO. 1	Sec. 25: S 1/2 S 1/2
MARY ANN NO. 2	Sec. 25: N 1/2 S 1/2
MARY ANN NO. 3	Sec. 25: S 1/2 N 1/2
MARY ANN NO. 4	Sec. 25: N 1/2 N 1/2
MARY ANN NO. 5	Sec. 24: S 1/2 S 1/2
MARY ANN NO. 6	Sec. 24: N 1/2 S 1/2
MARY ANN NO. 7	Sec. 24: S 1/2 N 1/2

MARY ANN NO. 8	Sec. 24: Lots 1, 2, 3, and 4 (N 1/2 N 1/2)
MARY ANN NO. 9	Sec. 23: Lot 1, NW 1/4 NW 1/4, N 1/2 NE 1/4 (N 1/2 N 1/2)
MARY ANN NO. 10	Sec. 23: Lot 2, SW 1/4 NW 1/4, S 1/2 NE 1/4 (S 1/2 N 1/2)
MARY ANN NO. 11	Sec. 23: Lots 3, 4, 5, and 6 (N 1/2 S 1/2)
MARY ANN NO. 12	Sec. 23: S 1/2 S 1/2
MARY ANN NO. 13	Sec. 26: N 1/2 N 1/2
MARY ANN NO. 14	Sec. 26: S 1/2 N 1/2
MARY ANN NO. 15	Sec. 26: N 1/2 S 1/2
MARY ANN NO. 16	Sec. 26: S 1/2 S 1/2
MARY ANN NO. 17	Sec. 35: N 1/2 N 1/2
MARY ANN NO. 18	Sec. 35: S 1/2 N 1/2
MARY ANN NO. 19	Sec. 35: N 1/2 S 1/2
MARY ANN NO. 20	Sec. 35: Lots 1, 2, 3, and 4 (S 1/2 S 1/2)
MARY ANN NO. 21	Sec. 34: Lots 1, 2, 3, and 4 (S 1/2 S 1/2)
MARY ANN NO. 22	Sec. 34: N 1/2 S 1/2
MARY ANN NO. 23	Sec. 34: S 1/2 N 1/2
MARY ANN NO. 24	Sec. 34: N 1/2 N 1/2
MARY ANN NO. 25	Sec. 27: S 1/2 S 1/2
MARY ANN NO. 26	Sec. 27: N 1/2 S 1/2
MARY ANN NO. 27	Sec. 27: S 1/2 N 1/2
MARY ANN NO. 28	Sec. 27: N 1/2 N 1/2
MARY ANN NO. 29	Sec. 22: S 1/2 S 1/2

MARY ANN NO. 30	Sec. 22: Lots 3, 4, 5, and 6 (N 1/2 S 1/2)
MARY ANN NO. 31	Sec. 22: Lot 2, S 1/2 NW 1/4, SE 1/4 NE 1/4 (S 1/2 N 1/2)
MARY ANN NO. 32	Sec. 22: Lot 1, N 1/2 NW 1/4, NE 1/4 NE 1/4 (N 1/2 N 1/2)
MARY ANN NO. 33	Sec. 28: N 1/2 N 1/2
MARY ANN NO. 34	Sec. 28: S 1/2 N 1/2
MARY ANN NO. 35	Sec. 28: N 1/2 S 1/2
MARY ANN NO. 36	Sec. 28: S 1/2 S 1/2
MARY ANN NO. 37	Sec. 33: N 1/2 N 1/2
MARY ANN NO. 38	Sec. 33: S 1/2 N 1/2
MARY ANN NO. 39	Sec. 33: N 1/2 S 1/2
MARY ANN NO. 40	Sec. 33: S 1/2 S 1/2